

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 5, 6, 27, 28 and 30 are pending in the application, with claim 5 being the independent claim. Claims 1-4 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested. Claim 5 has been amended to make it independent. Claims 6, 27, 28 and 30 have been amended to be dependent from claim 5 instead of cancelled claim 1.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Description of the Invention

The present invention relates to 2,4,6-phenyl substituted cyclic ketoenols, to a plurality of processes for their preparation and to their use as pesticides and/or herbicides.

Double Patenting Rejection

The rejection of claims 1-6 and 27-28 as allegedly being unpatentable on the ground of obviousness-type double patenting over claims 1-3 and 6-8 of U.S. Patent No. 6,358,887 ("the '887 patent") is respectfully traversed. Claims 1-4 have been cancelled rendering their rejection moot.

The Office has stated that although the conflicting claims are not identical, they are not patentably distinct from each other because there is significant overlap between

Reply to Office Action of August 26, 2010

the instant claims and claims 1-3 and 6-8 of the '887 patent. Office Action, p. 3.

Applicants respectfully disagree.

A. Legal Principles

The Manual of Patent Examining Procedure ("M.P.E.P.") states that the "analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. § 103 obviousness determination." M.P.E.P. 804(II)(B)(1). The M.P.E.P. guidelines for obviousness analysis in genus-species situations state that "[t]he fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a prima facie case of obviousness." *In re Jones*, 958 F.2d 347, 350, (Fed. Cir. 1992); *In re Baird*, 16 F.3d 380, 382, (Fed. Cir. 1994). M.P.E.P. 2144.08(II). *In re Baird* was an appeal from the decision of the Board of Patent Appeals and Interferences affirming the examiner's final rejection of claims 1-5 of application Serial No. 07/333,524 as unpatentable on the ground of obviousness under 35 U.S.C. § 103 (1988). The claims at issue in *In re Baird* recited three specific compounds that were encompassed by a very large genus disclosed in the prior art reference cited by the examiner. Further, the prior art reference specifically identified certain compounds as "typical," "preferred," or "optimum" that were different from the compounds claimed in the application under rejection. *In re Baird* at 383. The court found that the prior art reference did not render the claims obvious, reasoning that the "disclosure of millions of compounds [did] not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds." *In re Baird* at 383.

Reply to Office Action of August 26, 2010

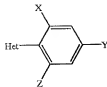
While *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) sets forth a flexible approach to obviousness, in the context of obviousness of a chemical compound recent post-KSR court decisions on obviousness determinations require the Office to (1) identify some reason that would have led a person of ordinary skill in the art to select a particular compound as a "lead compound" in the cited reference; and (2) show that a reason existed, based on what was known at the time of the invention, to perform the chemical modifications necessary to achieve the presently claimed compounds. *See Takeda Chem. Indus. v. Mylan Labs.*, 549 F.3d 1381 (Fed. Cir. 2008); *Eisai Co., Ltd. v. Teva Pharms. USA, Inc.*, 533 F.3d 1353 (Fed. Cir. 2008). Furthermore, as cautioned by Judge Rader in *In re Kubin*, 561 F.3d 1351 (Fed. Cir. 2009), "where a defendant merely throws metaphorical darts at a board filled with combinatorial prior art possibilities, courts should not succumb to hindsight claims of obviousness." *In re Kubin* at 1359.

The reasoning regarding the determination of obviousness in the present situation can be analogized to the reasoning applied in selecting a particular lead compound from a prior art reference to establish obviousness of a chemical compound. *See, e.g., Takeda*, 549 F.3d 1381. The Office should identify some reason that would have led a person of ordinary skill in the art to select a particular compound as a "lead compound" in the cited reference and show that a reason existed to perform the appropriate modifications on the appropriate positions to arrive at the claimed subgenus.

B. The claims of the '887 patent do not render the instant claims obvious

Claims 1-3 of the '887 patent recite compounds of formula

Reply to Office Action of August 26, 2010



wherein X, Y, Z and Het represent a very large variety of radicals.

Accordingly, the '887 patent claims recite a very large genus of compounds encompassing hundreds of thousands of compounds, while the instant claims are directed to a narrow subgenus of compounds. Even the narrowest sub-genus recited by dependent claim 3 of the '887 patent is significantly broader than the small sub-genus recited by the instant claims.

The compounds in the instant claims are a non-obvious selection invention of the broad genus claimed in the '887 patent. The facts of the present obviousness-type double patenting rejection are analogous to the facts in *In Re Baird*, discussed above. As noted, the prior art reference in *In Re Baird* was also directed to a generic diphenol formula containing a large number of variables. Further, the "typical," "preferred," or "optimum" compounds of the prior art reference were different from and did not point to the three compounds claimed in the pending application. Likewise, in the current rejection, claims 1-3 of the '887 patent recite a large genus that does not point to a "typical," "preferred," or "optimum" species or subgenus that would direct one of skill in the art to the claimed subject matter. In fact, claim 4 of the '887 patent is directed to a specific compound that the claims of the above-captioned application do not read on. As of the filing date, using the guideposts in the '887 patent, a person of ordinary skill in the art would not have been directed to the compounds claimed in the captioned invention.

The facts of the current case are analogous to the lead compound analysis presented in, for example, *Takeda Chem. Indus. v. Alphapharm Pty., Ltd.*, 492 F.3d (Fed.

Reply to Office Action of August 26, 2010

Cir. 2007). The Office has not provided a reason for a person of ordinary skill in the art to select one or more lead compounds from the genus recited in claims 1-3 of the '887 patent and appropriately modify the lead compound(s) to arrive at the sub-genus recited in the captioned application. The claims of the '887 patent recite a very large genus of compounds encompassing hundreds of thousands of compounds. As noted above, even the narrowest claims of the '887 patent recites a genus far larger than the narrow sub-genus recited in the instant claims. Even if a person of ordinary skill in the art were to consider the specific compound recited in claim 4 of the '887 patent as a lead compound, the claims of the '887 patent do not provide any guidance to modify the X, Y, Z, A, B, D and G substituents in order to obtain the sub-genus recited in the present claims. Therefore, the claims of the '887 patent do not render obvious the claims of the instant invention.

C. The disclosure of the '887 patent does not render the instant claims obvious

The M.P.E.P. states that "[w]hen considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art." *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279 (Fed. Cir. 1992). M.P.E.P. 804(II)(B)(1). Accordingly, the disclosure of the '887 patent may not be used as prior art when considering the claims of the present application.

However, even if the disclosure in the '887 patent were considered, the disclosure would not render the present claims obvious over the claims of the '887 patent. The disclosure of the '887 patent does not point to a "typical," "preferred," or "optimum" species or subgenus that would direct one of skill in the art to the claimed subject matter.

Reply to Office Action of August 26, 2010

In fact, the compounds specifically disclosed in Tables 1-15 of the '887 patent would have directed a person of ordinary skill in the art away from the compounds of the present invention. The compounds specifically disclosed in Tables 1-30 of the '887 patent are not even encompassed by the sub-genus recited in the instant claims. The '887 patent, Col. 39, line 1 - Col. 43, line 21. For example, the X, Y and Z groups of the specifically disclosed compounds in the '887 patent are completely different from the corresponding X, Y and W groups recited by the instant claims. For example, none of the compounds in Tables 1-15 of the '887 patent contain a chlorine substituent on the phenyl ring. Further, compounds exemplified in Tables 1-11 of the '887 patent contain a -CN group in at least one of X, Y or Z positions and Tables 16-30 of the '887 patent exemplify compounds with a different CKE group. In contrast, the instantly claimed compounds require a chlorine, methyl and oxygen linked group (methoxy, ethoxy, n-propoxy, methoxyethoxy or cyclopropylmethoxy), respectively, at the X, Y and W positions on the phenyl ring. Therefore, the disclosure of the '887 patent would not have directed a person of ordinary skill in the art to the compounds of the present invention.

Even considering the lead compound analysis presented in *Takeda*, the lead compound identified by a person of ordinary skill in the art reading the disclosure of the '887 patent would be very different from the compounds recited in the claims of the captioned application. The disclosure does not provide any reason to appropriately modify all of the different substituents to obtain the subgenus claimed in the instant claims.

Reply to Office Action of August 26, 2010

D. Dr. Wolfgang's Thielert's Declaration

Even assuming that a *prima facie* case of obviousness has been established, which it has not, the unexpected herbicidal action exhibited by the claimed compounds is sufficient to overcome any *prima facie* case of obviousness. Applicants refer to the Declaration under 37 C.F.R. § 1.132 ("Declaration") of Dr. Wolfgang Thielert that compares the efficacy of compounds of the present invention to compounds encompassed by the claims of the '887 patent, submitted on July 26, 2010. The Office stated that the Declaration submitted by Dr. Wolfgang Thielert is not relevant to this obviousness-type double patenting rejection. Office Action, p. 4. Applicants respectfully disagree and submit that the Declaration clearly demonstrates the superiority of the instantly claimed compounds to compounds encompassed by the claims of the '887 patent. In the Declaration, chemist Dr. Wolfgang Thielert recites data comparing the insecticidal action of the compounds of the present invention to compounds encompassed by the claims of the '887 Patent.

The results in the Declaration demonstrate that compounds of the present invention are far superior to compounds encompassed by the larger genus of compounds recited generally in the '887 patent claims, even at lower levels of application. For example, compound I-1-a-3 of the present invention exhibits a 65% aphid killing efficacy six days after application compared to 30% efficacy for a compound I-1-a-26, which the claims of the '887 patent read on, despite the fact that compound I-1-a-26 was used at twice the level of application of compound I-1-a-3. Declaration, p. 2. Further, compound I-1-b-1 of the present invention exhibits a 50% aphid killing efficacy six days after application compared to 0% efficacy for compound I-1-b-6, which the claims of the

Reply to Office Action of August 26, 2010

'887 patent read on, despite the fact that compound I-1-b-6 was used at a much higher level of application than compound I-1-b-1 (4 ppm versus 10 ppm, respectively). Similar results are seen for compounds I-1-c-1 and I-1-c-7 of the captioned invention. *Id.* p 3-4.

The M.P.E.P. states that "a showing of unexpected results for a single member of a claimed subgenus, or a narrow portion of a claimed range would be sufficient to rebut a *prima facie* case of obviousness if a skilled artisan 'could ascertain a trend in the exemplified data that would allow him to reasonably extend the probative value thereof.' *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980) (Evidence of the unobviousness of a broad range can be proven by a narrower range when one skilled in the art could ascertain a trend that would allow him to reasonably extend the probative value thereof.)." M.P.E.P. 2145. The Declaration shows the results of tests conducted on seven compounds that are encompassed by the present claims of the captioned application. These compounds have Cl, CH₃ and -OCH₃ at the X, Y and W positions, respectively. The compounds also contain cyclohexyl with and without an oxygen atom at the A-B position, three different substituents at G, and a hydrogen at D. The tests accordingly show the superiority of a broad range of compounds encompassed by the claims of captioned application. The results demonstrate that even assuming *arguendo* that a *prima facie* case of obviousness had been established, it would be properly rebutted by the unexpectedly superior results of the compounds of the present invention.

The Applicants wish to note that the example number is missing from the first row of the table on page 3 of the list of compounds submitted to the EPO during prosecution of EP 0909629. The missing example number is "Ex. I-1-b-23."

Withdrawal of the rejection is respectfully requested.

Reply to Office Action of August 26, 2010

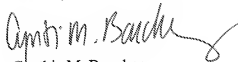
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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